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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|------------------------|---------------------|------------------|
| 10/580,430  | 08/11/2006  | Olivier Andrieu        | 06059               | 2551             |
| 23338 7590 05/12/2008<br>DENNISON, SCHULTZ & MACDONALD<br>1727 KING STREET<br>SUITE 105<br>ALEXANDRIA, VA 22314 |             |                        |                     |                  |
| EXAMINER<br>NGUYEN, DANNY   |             |                        |                     |                  |
| ART UNIT<br>2836  |             | PAPER NUMBER           |                     |                  |
| MAIL DATE<br>05/12/2008   |             | DELIVERY MODE<br>PAPER |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/580,430

**Applicant(s)**

ANDRIEU, OLIVIER

**Examiner**

DANNY NGUYEN

**Art Unit**

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 13-26 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 6/9/06  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "an integrated means as recited in claim 22" as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The Specification of the disclosure is objected to because the specification does not contain the followings: Background of the Invention, Field of the Invention, Description of the Related Art, Brief Summary of the Invention, Brief Description of the Several Views of the Drawing(s), and Detailed Description of the Invention. Correction is required.

**Abstract**

3. The abstract of the disclosure is objected to because the abstract contains improper languages. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Please delete "(Figure to be published: Single Fig.)."

***Claim Objections***

4. Claims 13, 15, 16, 20, 21, 22, 23 are objected to because of the following informalities:

Claim 13,

Line 3, "at least one of which forms..." should be "at least one of the pieces of the electric equipment which forms..."

Lines 10, 11, "the normal or abnormal operating state of at least one piece of electric equipment" should be "a normal or an abnormal operating state of the at least one piece of the electric equipment".

Line 13, "at least the electric circuit..." should be "the at least one electric circuit..."

Claim 15, line 2, "in the circuit of a piece of electric equipment" should be "in the circuit of the piece of the electric equipment".

Claim 16, line 3, "a power source" should be "the power source".

Claim 20, line 2, "in the circuit of a piece of electric equipment" should be "in the circuit of the piece of the electric equipment".

Claim 21, line 2, "in the circuit of pieces of electric equipment" should be "in the circuit of the pieces of the electric equipment".

Claim 22, line 2, "power source on an electric circuit" should be "the power source on the electric circuit".

Claim 23, "at least one safety electric circuit" should be "at least one electric circuit".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 14, 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 14, 21, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

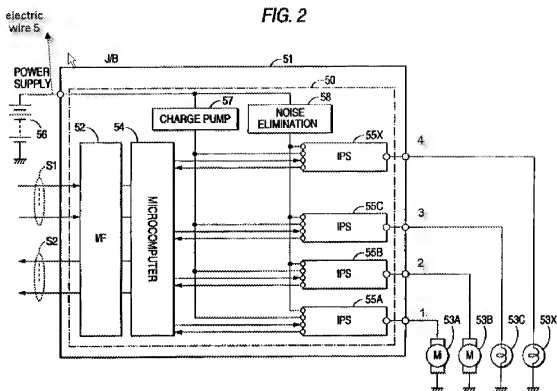
***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 13-18, 20-23, 25, 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Baba et al (USPN 5,894,394).



Regarding claims 13, 15, Baba discloses a smart safety device (50) (see figures 2, 3, 8) for at least one piece of electric equipment (such as loads 53A to 53X) on board a vehicle including a network of electric circuits (e.g. the electric wires 1-5 coupled to the loads) wherein pieces of the electric equipment are mounted, at least one (5) which forms a power source (a battery 56), characterized in that it appears as a box (such as a junction box 51) including mounting means on at least one electric circuit, the box comprising:

at least one sensor (such as current sensing resistor R0 includes in each of IPS 55A to 55X, see figures 2, 3) for measuring a current (I0) flowing on an electric circuit of the network (e.g. e.g. see col. 10, lines 34-37),

a computing and control unit (a microcontroller 54, see figure 3) including means (such as 54A, see figure 3) for acquiring current measurements taken by the current sensor (e.g. col. 15, lines 36-40),

computing means (54B) which depending on current measurements and on determined operating criteria of the electric network, determine the normal or abnormal operating state of the at least one piece of the electric equipment (e.g. col. 15, lines 40-46), and

at least one disconnecting system (61) controlled by the computing and control unit (54) so as to disconnect the at least one electric circuit including the piece of the electric equipment (see col. 15, lines 22-35).

Regarding claim 14, Baba discloses means (such as temperature detection circuit 70) for acquiring measurements of at least one operating parameter of the power supply.

Regarding claim 16, Baba discloses the computing and control unit includes means (52) for communicating with a centralized system (such as operation panel 3, see figure 8 for managing a power source (see col. 1, lines 17-34).

Regarding claims 17, 18, Baba discloses the computing means (54B) determines the operating condition of the pieces of electric equipment according to the operating stage signals of the vehicle transmitted by the centralized system (operation panel 3) (e.g. see col. 1, lines 17-34, col. 8, 9, lines 60-9).

Regarding claims 20, Baba discloses the current measurement sensor (the current sensing resistor R0 of the current detection circuit 67, see figure 3) is mounted



in the circuit of a piece of electric equipment forming a power source (51) (the circuit wiring of the load 53A, see figure 2).

Regarding claim 21, Baba discloses the current measurement sensor (R0) is mounted in the circuit (53B) of pieces of electrical equipment on board computer (see figure 8), the disconnecting system (61) being mounted in the circuit.

Regarding claim 22, Baba discloses the box (51) includes means (inherent) for mounting power source (56) (see figure 8) on an electric circuit and integrated means (87) for recovering (reset) power delivered by the source in order to power different electric components of the box (51) (e.g. col. 12, 13, lines 26-15).

Regarding claim 23, Baba discloses the disconnecting system (61) is mounted in the electric network outside at least one safety electric circuits (53A to 53X).

Regarding claims 25, 26, Baba discloses the power source is selected from the, a battery (56).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Baba et al in view of Parsonage (USPN 6,242,891).

Regarding claim 19, Baba discloses the current measurement sensor is a sensing resistor, but does not disclose the sensor is a hall effect type as claimed.

However, providing a current sensor which used a hall effect type is well known in the art at typically is taught by Parsonaga.

Parsonaga discloses a current sensing resistor (8) can be replaced by a Hall Effect type (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the current sensing resistor of Baba to replace with a Hall Effect type as disclosed by Parsonaga because it provides high accuracy, high reliability, and low manufacturing cost.

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baba et al in view of Mackel et al (USPN 6,242,891).

Regarding claim 24, Baba does disclose the disconnecting system (61), but does not the disconnecting system is pyrotechnical type as claimed.

However, providing a disconnecting switch with using a pyrotechnical type is well known in the art. Selecting a specific disconnecting switch is based on the design constraint imposed by the system in which the switch is designed to be used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the disconnecting system of Baba to incorporate the pyrotechnical switch based upon such design because this type of the disconnecting switch is a known as taught by Mackel (see col. 14, lines 14-15).

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANNY NGUYEN whose telephone number is (571)272-2054. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL SHERRY can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Danny Nguyen/  
Examiner, Art Unit 2836

